Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended) A rotary heat sealing device for welding a trailing sheet tail on a roll of sheet material to an underlying layer of the sheet material on the roll, the rotary heat sealing device comprising:

a thermally conductive, heat sealing disk mounted for rotation about an axis; and

a heating element for heating an inner portion of the disk so as to cause thermal conduction radially through the disk toward an outer portion of the disk and towards an outer peripheral surface thereof;

wherein the heat sealing disk is engageable with the outer surface of the trailing sheet tail on the roll of sheet material to weld the tail to the underlying layer of sheet material on the roll.

Claim 2 (Original) The rotary heat sealing device of claim 1, wherein the heating element is located adjacent the inner portion of the disk.

Claim 3 (Original) The rotary heat sealing device of claim 2, wherein the heating element is fixed to a support and the heat sealing disk is rotatable adjacent the heating element.

Claim 4 (Original) The rotary heat sealing device of claim 1, wherein the heating element is fixed to the disk.

Claim 5 (Original) The rotary heat sealing device of claim 1, wherein the heating element forms at least a part of the disk.

Claim 6 (Original) The rotary heat sealing device of claim 1, wherein the heat sealing disk defines a plurality of spaced teeth along the outer periphery thereof.

Claim 7 (Original) The rotary heat sealing device of claim 1, wherein the outer portion of the heat sealing disk tapers inwardly towards the outer peripheral surface thereof.

Claim 8 (Original) The rotary heat sealing device of claim 1, further comprising resilient support means for supporting the heat sealing disk in cantilever, floating fashion.

Claim 9 (Original) The rotary heat sealing device of claim 8, wherein the resilient support means is adjustable.

Claim 10 (Original) The rotary heat sealing device of claim 1, further comprising a thermostat for regulating the temperature at the outer peripheral surface of the heat sealing disk.

Claim 11 (Original) The rotary heat sealing device of claim 1, further comprising control means for controlling the conveyance of the rolls of sheet material to the heat sealing disk.

Claim 12 (Currently amended) A rotary heat sealing device for welding a trailing sheet tail on a roll of sheet material to an underlying layer of the sheet material on the roll, the rotary heat sealing device comprising:

a thermally conductive, heat sealing disk mounted for rotation about an axis; and

a heating element for heating an inner portion of the disk so as to cause thermal conduction radially through the disk toward an outer portion of the disk and towards an outer peripheral surface thereof.

Claim 13 (Original) The rotary heat sealing device of claim 12, wherein the heating element is located adjacent the inner portion of the disk.

Claim 14 (Original) The rotary heat sealing device of claim 13, wherein the heating element is fixed to a support and the heat sealing disk is rotatable adjacent the heating element.

Claim 15 (Original) The rotary heat sealing device of claim 12, wherein the heat sealing disk defines a plurality of spaced teeth along the outer periphery thereof.

Claim 16 (Original) The rotary heat sealing device of claim 12, wherein the outer portion of the heat sealing disk tapers inwardly towards the outer peripheral surface thereof.

Claim 17 (Original) The rotary heat sealing device of claim 12, further comprising resilient support means for supporting the heat sealing disk in cantilever, floating fashion.

Claim 18 (Original) The rotary heat sealing device of claim 17, wherein the resilient support means is adjustable.

Claim 19 (Currently amended) A method of welding a trailing sheet tail on a roll of sheet material to an underlying layer of the sheet material on the roll, the method comprising:

mounting a thermally conductive, heat sealing disk for rotation about an axis;

heating an inner portion of the disk so as to cause thermal conduction radially through the disk toward an outer portion of the disk and towards an outer peripheral surface thereof; and

engaging the heat sealing disk with the outer surface of the trailing sheet tail of the roll of sheet material to weld the tail to the underlying layer of sheet material on the roll.

Claim 20 (Original) The method of claim 19, wherein the inner portion of the disk is heated by locating a heating element adjacent the inner portion and heating the heating element.

Claim 21 (Original) The method of claim 19, wherein the inner portion of the disk is heated by providing a heating element in a central region of the disk and heating the heating element.

Claim 22 (Original) The method of claim 19, wherein the heat sealing disk defines a plurality of spaced teeth along the outer periphery thereof, and the trailing sheet tail of the roll of sheet material is welded to the underlying layer of sheet material on the roll by engaging the teeth on the heat sealing disk with the outer surface of the trailing sheet tail.

Claim 23 (Original) The method of claim 19, further comprising resiliently supporting the heat sealing disk in cantilever, floating fashion.

Claim 24 (Original) The method of claim 19, further comprising regulating the temperature at the outer peripheral surface of the heat sealing disk.

Claim 25 (Original) The method of claim 19, further comprising mounting the heat sealing disk above a conveyor belt for conveying rolls of sheet material one behind the other, and sequentially engaging the heat sealing disk with the outer surface of the trailing sheet tail on each roll of sheet material.

Claim 26 (Original) The method of claim 25, further comprising controlling the conveyance of the rolls of sheet material to the heat sealing disk to ensure that the outer peripheral surface of the disk remains within a range of predetermined, operable temperatures.